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IS 3093 (1981): Dah, Jungle Cutting [FAD 21: Farm Implements and Machinery]



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IS : 3093 - 1981

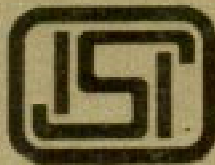
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Indian Standard

SPECIFICATION FOR DAH, JUNGLE CUTTING

(First Revision)

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SPECIFICATION FOR DAH, JUNGLE CUTTING

(First Revision)

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Indian Standard

SPECIFICATION FOR DAH, JUNGLE CUTTING

(First Revision)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 29 June 1981, after the draft finalized by the Horticultural Equipment Sectional Committee had been approved by the Agricultural and Food Products Division Council.

0.2 Dah is a tool extensively used in cutting trees and clearing jungle growth. This tool is also sometime used by the Defence Services in jungle warfare.

0.3 This standard was first published in 1965. In the implementation of this standard, certain difficulties, particularly with regard to material and dimensions, were faced by the Controllorate of General Stores, Ministry of Defence, Kanpur. This standard has, therefore, been revised to make it more implementable. Amendment No. 1 issued to the earlier version of the standard has been incorporated in this revision.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard specifies materials, dimensions and other requirements for dah.

2. MATERIALS

2.1 The blade of the dah shall be manufactured from carbon steel, alloy steel or tool steel.

2.1.1 The chemical composition of carbon steel shall be as follows:

a) Carbon 0.5 to 0.9 percent,

*Rules for rounding off numerical values (revised).

IS : 3093 - 1981

- b) Manganese 0.5 to 0.9 percent,
- c) Sulphur 0.05 percent *Max*, and
- d) Phosphorus 0.05 percent *Max*.

2.1.1.1 Some of the typical carbon steels that may be used are: C 55, C 55 Mn 75, C 60, C 65, C 70, C 75, C 80 and C 85 (*see* IS : 1570-1961*).

2.1.2 Alloy steel preferably conforming to grade 16 NiCr₂ Mo 20, 37 Si 2 Mn 90 or 37 Mn 2 of IS : 4367-1967† should be used.

2.1.3 Tool steel preferably conforming to grade T 55, T 60, T 65, T 60 Mn 65 (*see* IS : 1570-1961*) and T 75 or T 85 of IS : 4367-1967‡ should be used.

2.2 **Handle** — Timber (*see* Appendix D of IS : 620-1975‡) shall be used.

2.3 **Rivets** — Mild steel (*see* IS : 226-1975§) shall be used.

3. HARDNESS

3.1 The blade of the dah shall be heat-treated to give a hardness within a range of 400 to 475 *HB* or *HBW* (*see* IS : 1500-1968||) or its equivalent in other scales.

4. DIMENSIONS

4.1 Unless otherwise agreed to between the purchaser and the supplier, the dimensions of the dah shall be as given in Fig. 1. The tolerance for various dimensions shall be as given in IS : 2102-1969¶.

4.2 The thickness of the blade near the cutting edge shall be 1.5 mm. Thickness of back edge near the handle shall be 6.5 ± 0.1 mm from where it shall gradually decrease to 3.15 mm at the front.

5. WORKMANSHIP AND FINISH

5.1 The dah shall be forged to shape. The forging shall be free from cracks, pits, burrs and other visual defects. The blade as well as tang shall be drawn well.

5.2 The rivets shall be countersunk and flushed with the surface of handle.

5.3 The blade shall be finished bright and cutting edge sharpened.

*Schedules for wrought steels for general engineering purposes.

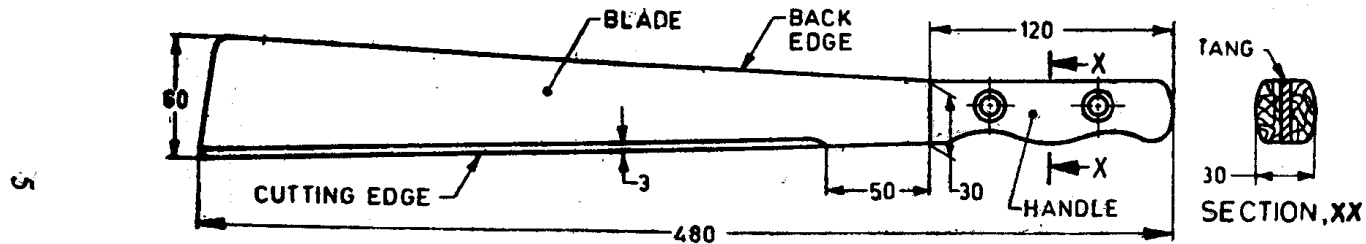
†Specification for alloy and tool steel forgings for general industrial use.

‡General requirements for wooden tool handles (*third revision*).

§Specification for structural steel (standard quality) (*fifth revision*).

||Method for Brinell hardness test for steel (*first revision*).

¶Allowable deviations for dimensions without specified tolerances (*first revision*).



All dimennsions in millimetres

FIG. 1 DAH JUNGLE CUTTING

5.4 The blade shall be given a coat of any suitable mineral jelly or any other corrosion preventives (*see* IS : 1153-1975*).

5.5 The handle shall be varnished.

6. TESTS

6.1 The cutting edge of the dah shall be tested by striking atleast six hard blows on a suitably shaped dry hard wood blocks, such as *BABUL*, tamarind, *HALDU*, *BIJA SAL*, Sal and Sissoo, across their grain. During or on the completion of the test, the edge shall not show any sign of damage.

6.2 The back and flat portions of the blade shall be tested by striking at least three sharp blows on a suitably shaped block of lead. During or on the completion of the test, the blade shall not show any sign of damage.

7. MARKING AND PACKING

7.1 Marking — The dah shall be marked with the following particulars:

- a) Manufacturer's name and recognized trade mark, if any; and
- b) Batch or code number.

7.1.1 Each dah may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

7.2 Packing — The dah shall be packed for safe handling in transit as agreed to between the purchaser and the supplier.

8. SAMPLING FOR LOT ACCEPTANCE

8.1 Unless otherwise agreed to between the purchaser and the supplier, the method of sampling and criteria for conformity of dah for lot acceptance shall be as given in 3 of IS : 7201-1974†.

8.1.1 The classification of different requirements of this standard for the purpose of testing for lot acceptance is given below for guidance :

- a) *Dimensional and visual requirements* — *see* 4, 5 and 7.1.
- b) *Requirements other than dimensional and visual* — *see* 3 and 6.

*Specification for temporary corrosion preventive, fluid, hard film, solvent deposited (*first revision*).

†Method of sampling of agricultural machinery and tractors.

INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

Quantity	Unit	Symbol
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

Quantity	Unit	Symbol
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

Quantity	Unit	Symbol	Definition
Force	newton	N	1 N = 1 kg.m/s ²
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m ²
Frequency	hertz	Hz	1 Hz = 1 c/s (s ⁻¹)
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m ²

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